



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-0521; Project Identifier MCAI-2022-00273-T; Amendment 39-22187; AD 2022-20-03]**

**RIN 2120-AA64**

**Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain MHI RJ Aviation ULC Model CL-600-2C10 (Regional Jet Series 700, 701 & 702); CL-600-2C11 (Regional Jet Series 550); CL-600-2D15 (Regional Jet Series 705); CL-600-2D24 (Regional Jet Series 900); and CL-600-2E25 (Regional Jet Series 1000) airplanes. This AD was prompted by laboratory tests that showed that the oxygen tubes of the crew oxygen system may be contaminated with lubricants, as a result of the manufacturing and cleaning procedures used. This AD requires cleaning and flushing the crew oxygen system. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0521; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

*Material Incorporated by Reference:*

- For service information identified in this final rule, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email [thd.crj@mhjrj.com](mailto:thd.crj@mhjrj.com); website [mhjrj.com](http://mhjrj.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0521.

**FOR FURTHER INFORMATION CONTACT:** Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**SUPPLEMENTARY INFORMATION:****Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain MHI RJ Aviation ULC Model

CL-600-2C10 (Regional Jet Series 700, 701 & 702); CL-600-2C11 (Regional Jet Series 550); CL-600-2D15 (Regional Jet Series 705); CL-600-2D24 (Regional Jet Series 900); and CL-600-2E25 (Regional Jet Series 1000) airplanes. The NPRM published in the *Federal Register* on May 17, 2022 (87 FR 29841). The NPRM was prompted by AD CF-2022-06, dated February 28, 2022, issued by Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada (referred to after this as the MCAI). The MCAI states that laboratory tests showed that the oxygen tubes of the crew oxygen system may be contaminated with lubricants, as a result of the inadvertent use of a non-conforming aqueous degreasing process for oxygen line flushing and cleaning during the manufacturing process. If not corrected, lubricant remaining in oxygen lines could lead to a fire within the oxygen tubes or a health hazard related to the inhalation of lubricant fumes through the masks when masks are in use.

In the NPRM, the FAA proposed to require cleaning and flushing the crew oxygen system. The FAA is issuing this AD to address the contaminated oxygen tubes of the crew oxygen system, which could lead to a fire within the oxygen tubes, or a health hazard related to the inhalation of lubricant fumes when the masks are in use.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0521.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received a comment from MHI RJ Aviation ULC. The following presents the comment received on the NPRM and the FAA's response to the comment.

### **Request to Change MHI RJ Contact Information**

MHI RJ Aviation ULC requested that the NPRM be revised to correct its contact information.

The FAA has included the correct contact information under ADDRESSES in this final rule and in paragraph (k)(3) of this AD.

### **Conclusion**

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

### **Related Service Information under 1 CFR Part 51**

The FAA reviewed MHI RJ Service Bulletin 670BA-35-016, Revision B, dated December 17, 2021. This service information specifies procedures for low-pressure and high-pressure cleaning of the crew oxygen tubes. The tasks include cleaning the end fittings and threads, cleaning the inner wall of the tubes with solvent, and flushing the inner wall of the tubes with nitrogen.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

The FAA estimates that this AD would affect 34 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
51 work-hours X \$85 per hour = \$4,335	Up to \$1,240	Up to \$5,575	Up to \$189,550

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-20-03 MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):** Amendment 39-22187; Docket No. FAA-2022-0521; Project Identifier MCAI-2022-00273-T.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) airplanes identified in paragraphs (c)(1) through (4) of this AD, certificated in any category.

(1) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) and CL-600-2C11 (Regional Jet Series 550) airplanes, serial numbers 10346 and 10347.

(2) Model CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15413 through 15484 inclusive.

(3) Model CL-600-2E25 (Regional Jet Series 1000) airplanes, serial numbers 19049 through 19064 inclusive.

(4) Model CL-600-2C10, CL-600-2C11, CL-600-2D15, CL-600-2D24 and CL-600-2E25 airplanes equipped with tube part numbers installed after the dates indicated in Section 1.A.(2) of MHI RJ Service Bulletin (SB) 670BA-35-016, Revision B, dated December 17, 2021.

**(d) Subject**

Air Transport Association (ATA) of America Code 35, Oxygen.

**(e) Unsafe Condition**

This AD was prompted by laboratory tests that showed that the oxygen tubes of the crew oxygen system may be contaminated with lubricants, as a result of the manufacturing and cleaning procedures. The FAA is proposing this AD to address the contaminated oxygen tubes of the crew oxygen system, which could lead to a fire within the oxygen tubes, or a health hazard related to the inhalation of lubricant fumes when the masks are in use.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Requirements**

Within 8,800 flight hours after the effective date of this AD, clean and flush the crew oxygen system, in accordance with the Accomplishment Instructions of MHI RJ Service Bulletin 670BA-35-016, Revision B, dated December 17, 2021.

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by this AD, if those actions were performed before the effective date of this AD, using the service information identified in paragraph (h)(1) or (2) of this AD.

(1) MHI RJ Service Bulletin 670BA-35-016, dated February 26, 2021.

(2) MHI RJ Service Bulletin 670BA-35-016, Revision A, dated November 5, 2021.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(j) Additional Information**

(1) Refer to TCCA AD CF-2022-06, dated February 28, 2022, for related information. This TCCA AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0521.

(2) For more information about this AD, contact Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York



ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) MHI RJ Service Bulletin 670BA-35-016, Revision B, dated December 17, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email thd.crj@mhirj.com; website mhirj.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on September 13, 2022.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

Editorial Note: This document was received for publication by the Office of the Federal Register on March 7, 2023.

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